

Some observations on the Fauna of the Maldive Islands (Indian Ocean) Part VIII. Marine Shells

BY

K. R. SMYTHE AND W. W. A. PHILLIPS

INTRODUCTION

Although the Marine Shells, comprising this small collection, were brought to England as long ago as 1957 and 1959, it is only recently that they have been critically examined and identified by Mrs. Smythe. They were collected, chiefly by Mrs. Paddy Phillips, in Male Atoll (1956/57) and in Addu Atoll (1958/59). Owing to other, more pressing, commitments, no efforts were made to make thoroughly representative collections but, even so, over a hundred species were obtained for the wealth of marine shells in these Islands is outstanding.

Most of the shells forming the collection were picked up, dead, on the beaches and coral reefs but some living shells were collected on the reefs at low tides and others were presented to us by the local Maldivians who are very shell-conscious.

Representative examples from the collection have been donated to the Natural History collections at the Bognor Regis Museum, in West Sussex, while others have been retained in private collections. In the following lists, the trivial (English) names have been given, where known.

For a short description of the Maldive Islands, reference may be made to Part I. 'Introduction' of this series of papers on the Fauna of the Maldive Islands, published in this *Journal* (April 1958), Vol. 55 (1): 1-10.

MARINE SHELLS FROM THE MALDIVE ISLANDS
(MALE ATOLL & ADDU ATOLL) INDIAN OCEAN,
COLLECTED BY MAJOR & MRS. W. W. A. PHILLIPS

Family CYPRAEIDAE (Cowrie Shells)

<i>Cypraea tigris</i> Linne.	=	Tiger Cowrie
<i>Pustularia globulus</i> Linne.	=	Globular Cowrie
<i>Arabica depressa</i> Gray	=	
<i>Arabica scurra</i> Gmelin	=	Jester Cowrie
<i>Arabica histrio</i> Gmelin	=	Harlequin Cowrie
<i>Evenaria asellus</i> Linne.	=	Three-banded Cowrie
<i>Evenaria hirundo</i> Linne.	=	Swallow Cowrie
<i>Ravitrana poraria</i> Linne.	=	
<i>Ravitrana caputserpentis</i> Linne.	=	Snakes-Head Cowrie
<i>Ravitrana helvola</i> Linne.	=	Star Cowrie
<i>Erosaria inocellata</i> Gray	=	
<i>Erosaria turdus</i> Lamarck	=	Thrush Cowrie
<i>Erosaria erosa</i> Linne.	=	Eroded Cowrie
<i>Lynacina lynx</i> Linne.	=	Lynx Cowrie
<i>Basilitrana isabella</i> Linne.	=	Isabelle Cowrie
<i>Ovatipsa chinensis</i> Gmelin	=	Chinese Cowrie
<i>Monetaria moneta moneta</i> Linne.	=	Money Cowrie
<i>Monetaria moneta monetoides</i> Iredale*	=	Money Cowrie
<i>Ornamentaria annulus scutellum</i> Schilder & Schilder	=	Ringed Cowrie
<i>Mauritia mauritiana</i> Linne.	=	Black or Hump-back Cowrie
<i>Talparia talpa</i> Linne.	=	Mole Cowrie
<i>Arestoides argus</i> Linne.	=	Argus-eyed Cowrie
<i>Nuclearia nucleus</i> Linne.	=	
<i>Ponda carneola</i> Linne.	=	Flesh-coloured Cowrie
<i>Palmadusta clandestina</i> Linne.	=	False Three-banded Cowrie

*Some Authorities consider that the *moneta* merge; they do not differentiate the sub-species.

Note—Cowries, of many species, would appear to be amongst the most plentiful shells in the Maldives. *Cypraea tigris*, although much sought after by the Maldivians, are commonly to be found in the pools on the coral reefs encircling the Islands, in both Male Atoll and Addu Atoll. Money Cowries were, until very recently, still used as minor currency; they are abundant everywhere.

Family CONIDAE (Cone Shells)

<i>Conus moreleti</i> Crosse	=	
<i>Conus eburneus</i> Hwass	=	
<i>Conus geographus</i> Linne.	=	Geography Cone
<i>Conus tessellatus</i> Born	=	Tessellate Cone
<i>Conus lividus</i> Hwass	=	
<i>Conus ebraeus</i> Linne.	=	Hebrew Cone

<i>Conus splendidulus</i> Sowerby	=	
<i>Conus arenatus</i> Hwass	=	
<i>Conus betulinus</i> Linne.	=	
<i>Conus chaldeus</i> Röding	=	
<i>Conus miles</i> Linne.	=	Soldier Cone
<i>Conus lithoglyphus</i> Hwass	=	
<i>Conus emaciatus</i>	=	
<i>Conus flavidus</i> Lamarck	=	Yellow Cone
<i>Conus omaria</i> Hwass	=	
<i>Conus fulgetrum</i> Sowerby	=	
<i>Conus nemocanus</i> Hwass	=	

Many of the smaller species of Cone Shells were almost as plentiful as the smaller Cowries on the reefs and beaches in Male and Addu Atolls. Very many of them were, however, much beach-worn. The larger species were not so plentiful. The venomous species *Conus geographus* appears to be rare.

Family TONNIDAE (Tun-Shells)

<i>Tonna galea</i> Linne.	=	
<i>Tonna perdux</i> Linne.	=	Partridge Tun-Shell

Family HARPIDAE (Harp-Shells)

<i>Harpa major</i> Röding	=	
<i>Harpa amouretta</i> Röding	=	

Family FASCIOLARIIDAE (Knobbed Chanks or Tulip Shells)

<i>Cantharus undosus</i> Linne.	=	
<i>Paralgena smaragdula</i> Linne.	=	
<i>Latirus polygonus</i> Gmelin	=	
<i>Pleuroploca filamentosa</i> Röding	=	

Family MITRIDAE (Mitre-Shells)

<i>Mitra mitra</i> Linne.	=	Episcopal Mitre
<i>Mitra digitalis</i> Dillwyn	=	
<i>Mitra</i> sp. + <i>Mitra</i> sp.	=	

Mitra mitra was moderately plentiful on the coral reefs of Addu Atoll.

Family STROMBIDAE (Wing-Shells, Strombs or Spider Conch)

<i>Lambis lambis</i> Linne.	=	Five-fingered Chank, Scorpion Shell or Common Spider Conch
<i>Lambis bryonia</i> Gmelin	=	Giant Five-fingered Chank
<i>Lambis chiragra</i> Linne.	=	Chiragra Spider Conch
<i>Strombus gibberulus</i> Linne.	=	Humped Conch
<i>Strombus mutabilis</i> Swainson	=	

Whereas *Lambis lambis* was plentiful on the reefs around both Male and Addu Atolls only one specimen of *Lambis bryonia* was obtained in Male.

Family TURBINIDAE (Turban Shells)

<i>Turbo petholatus</i> Linne.	=	Painted Turban
<i>Turbo intercostalis</i> Menke	=	Ribbed Turban

Family TEREBRIDAE (Auger Shells)

<i>Terebra crenulata</i> Linne.	=	Crenulate Auger
<i>Terebra dimidiata</i> Linne.	=	Dimidiate Auger
<i>Terebra subulata</i> Linne.	=	Subulate Auger
<i>Terebra maculata</i> Linne.	=	Marlinspike Shell

Family OLIVIDAE (Olive Shells)

<i>Oliva minacea</i> Röding	=	
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Family THAISIDAE (Rock Shells)

<i>Drupa ricina</i> Linne.	=	Prickly Drupe
<i>Drupa spathulifera</i> Blainville	=	
<i>Morula granulata</i> Duclos	=	
<i>Nassa sertum</i> Bruguiere	=	Sertum Rock Shell

Family HALIOTIIDAE (Abalone Shells)

<i>Haliotis ovina</i> Gmelin	=	
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Family BURSIDAE (Frog Shells)

<i>Bursa livida</i>	=	
<i>Bursa rosa</i> Perry	=	

Family CYMATIIDAE (Tritons or Triton Trumpet Shells)

<i>Charonia tritonis</i> Linne.	=	Charon's Trumpet or Pacific Triton
<i>Cymatium lotorium</i> Linne.	=	Lotorium Hairy Triton
<i>Cymatium gemmatum</i> Reeve	=	The Beaded Triton
<i>Distorsio anus</i> Linne.	=	
<i>Lampusia nicobarica</i> Röding	=	

Distorsio anus was plentiful around Dunidu Islet, close to Male, the Capital, in North Male Atoll, but was not seen elsewhere. A single large *Charonia tritonis*, about 8 inches in length, was presented to us in Gan, Addu Atoll. It appears to be scarce in the Maldives.

Family BULLIDAE (Bubble Shells)

Bulla ampulla Linne. = The Bubble Shell

Family PYRAMIDELLIDAE

Pyramidella acus Gmelin =

Family NASSARIDAE (Dog Whelks)

Nassarius sp. (possibly *crenulatus*) =

Family NERITIDAE (Nerite Snails)

Nerita polita Linne. = Polita Nerite

Nerita albicilla Linne. =

Nerita textilis Gmelin =

Family CERITHIIDAE (Horn Shells)

Cerithium nodulosum Bruguiere =

Cerithium echinatum Lamarck = Prickly Horn-Shell

Family MURICIDAE (Rock Shells)

Pterynotus triquetor Born =

Family VASIDAE (Vase Shells)

Vasum ceramicum Linne. = Ceram Vase

Vasum turbinellus var. *cornigerum* Lamarck = Dog Chank or Pacific Top Vase

Family CASSIDAE (Helmet Shells)

Cypraecassis rufa Linne. = Bull-mouth Helmet or Red Helmet

Cassis cornuta Linne. = Great Horned Helmet Shell

Phallium torquata Reeve =

Phallium vibex Reeve =

Cypraecassis rufa shells were found on the reefs around both Male Atoll and Addu Atoll but they were not common. The huge *Cassis cornuta* shells were obtained only in Male; they were reported to have been brought in from the waters around a small island in South Male Atoll, some 20 miles south of Male. It was reported that they were known only from this one island.

Family BUCCINIDAE (Whelks)

Colubraria maculosa Gmelin = False Triton Shell

Engina mendicaria Linne. =

Family NATICIDAE (Moon Shells)

Polinices mamilla Linne. = The Moon Shell

Natica sp. =

Family TROCHIDAE (Top Shells)

- Trochus maculatus* Linne. = Maculated Top Shell
Trochus acutangulus =

Small *Trochus* shells were plentiful on the beaches of both Male and Addu Atolls ; many worn examples were found on the coral-sand beaches.

Family TRIDACNIDAE (Clam Shells)

- Tridacna gigas* Linne. = Giant Clam
Tridacna squamosa Lamarck = Fluted Giant Clam

Clams, generally small, were plentiful on all the reefs ; the larger ones were in the deeper water.

Family PTERIIDAE (Wing Shells and Pearl Oysters)

- Pinctada margaritifera* Linne. = Black-Lipped Pearl Oyster

Pearl Oysters appeared to be very uncommon in the atolls ; only a few of the Black-lipped forms were seen.

- Pteria penguin* Röding = Wing-Shell or Wing-Oyster

A single, highly-polished shell of this species was presented to us in Addu Atoll. It was stated to be very rare but found occasionally, in rather deep water in the central lagoon, growing upon sunken tree-trunks. It is highly prized by the Maldivians.

Family LUCINIDAE (Lucines)

- Codakia punctata* Linne. = Punctate Lucine
Codakia tigrina Linne. = Pacific Tiger Lucine

Family GARIDAE (Sanguin Clams)

- Asaphis deflorata* Linne = Gaudy Asaphis

Family PINNIDAE (Pen Shells)

- Pinna* sp. =

A single *Pinna*, about 6 inches in length, was found standing vertically in the wet coral-sand, at low tide on a wide coral reef in Addu Atoll. It was alive and was buried for most of its length, only about an inch of the shell being exposed above the sand.

Family GLYCYMERIDAE

- Glycymeris* sp. =

Very little effort was made to collect Bivalve shells—hence the small number represented in this collection. Bivalves were, however, common on the beaches.

NOTES AND REFERENCES

(K.R.S.)

The identification of the Shells in this collection is largely based upon those in my own collection. The books that I have used through the years are listed below. From my own experience of collecting marine shells on the shores and the reefs of Tanzania and the off-shore islands, I feel sure that there must be many more species and varieties to be found by anyone who has the time to devote to a concentrated search of the area. Experience of collecting has shown that it is amazing how even showy and conspicuous molluscs can blend into their background, burrow or otherwise conceal their presence.

ACKNOWLEDGEMENTS

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REFERENCES

- ALLAN, JOYCE (1956): *Cowry Shells of World Seas*. Georgian House, Melbourne.
- CERNOHORSKY, WALTER, O. (1967): *Marine Shells of the Pacific*. Pacific Publications Pty Ltd., Sydney.
- HABE, TADASHIGE (1961): *Coloured Illustrations of the Shells of Japan, Vol. II*. Hoikusha Publishing Co. Ltd., Osaka, Japan.
- KIRA, TETSUAKI (1959): *Coloured Illustrations of the Shells of Japan, Vol. I*. Hoikusha Publishing Co. Ltd., Osaka, Japan.
- MARSH & RIPPINGALE (1964): *Cone Shells of the World*. Jacaranda Press, Melbourne.
- MELVIN, A. GORDON (1966): *Sea Shells of the World*. Charles E. Tuttle Company, Rutland, Vermont & Tokyo, Japan.
- SPRY, J. F. (1961): *The Sea Shells of Dar es Salaam—Gastropods*. Tanganyika Notes and Records.
- TINKER, SPENCER WILKIE (1963): *Pacific Sea Shells*, Fifth printing. Charles E. Tuttle Company, Rutland, Vermont & Tokyo, Japan.
- WEBB, W. F. (1960): *Handbook for Shell Collectors*, 15th edition. Lee Publications, Wellesley Hills, Massachusetts, U.S.A.